AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Original) An isolated nucleic acid comprising any one of SEQ ID NOS:1-32, or a sequence complementary to any one of SEQ ID NOS:1-32.

2. Canceled.

3. (Original) An isolated nucleic acid comprising at least 80% nucleotide identity with a nucleic acid comprising any one of SEQ ID NOS:1-32, or at least 80% nucleotide identity with a nucleic acid comprising a sequence complementary to any one of SEQ ID NOS:1-32.

4. (Original) The isolated nucleic acid according to claim 3, wherein the nucleic acid comprises at least an 85%, 90%, 95%, or 98% nucleotide identity with the nucleic acid comprising any one of SEQ ID NOS:1-32, or at least an 85%, 90%, 95%, or 98% nucleotide identity with the nucleic acid comprising a sequence complementary to any one of SEQ ID NOS:1-32.

5. (Original) An isolated nucleic acid that hybridizes under high stringency conditions with a nucleic acid comprising any one of SEQ ID NOS:1-32, or with a nucleic acid comprising a nucleotide sequence complementary to any one of SEQ ID NOS:1-32.

6. (Currently Amended) A nucleotide probe or primer specific of ABCC12 gene, wherein the nucleotide probe or primer comprises at least ~~15~~ 35 consecutive nucleotides of a nucleotide sequence of any one of SEQ ID NOS:1-32, or at least ~~15~~ 35

consecutive nucleotides of a nucleotide sequence complementary to any one of SEQ ID NOS:1-32.

7. (Original) A nucleotide probe or primer specific for an ABCC12 gene, wherein the nucleotide probe or primer comprises a nucleotide sequence of any one of SEQ ID NOS:35-46, or a nucleotide sequence complementary to any one of SEQ ID NOS:35-46.

8. (Original) A method of amplifying a region of the nucleic acid according to claim 1, comprising:

a) contacting the nucleic acid with two nucleotide primers, wherein the first nucleotide primer hybridizes at a position 5' of the region of the nucleic acid to be amplified, and the second nucleotide primer hybridizes at a position 3' of the region of the nucleic acid to be amplified, in the presence of reagents necessary for an amplification reaction;

b) amplifying the target nucleic acid; and

c) detecting the amplified nucleic acid region.

9. (Currently Amended) The method according to claim 8, wherein each nucleic acid primer is independently selected from the group consisting of

a) a nucleotide primer comprising at least 15 consecutive nucleotides of a nucleotide sequence of any one of SEQ ID NOS:1-32,

b) a nucleotide primer comprising at least 15 consecutive nucleotides of a nucleotide sequence complementary to any one of SEQ ID NOS:1-32,

~~c) a nucleotide primer as in any one of claims 6-8,~~

~~d)~~ c) a nucleotide primer comprising a nucleotide sequence of any one of SEQ ID NOS:35-46, and

~~e)~~ d) a nucleotide primer comprising a nucleotide sequence complementary to any one of SEQ ID NOS:35-46.

10. (Original) A kit for amplifying the nucleic acid according to claim 1, wherein the kit comprises:

a) two nucleotide primers whose hybridization position is located respectively 5' and 3' of the region of the nucleic acid to be amplified; and optionally,

b) reagents necessary for an amplification reaction.

11. (Original) The kit according to claim 10, wherein each nucleotide primer is independently selected from the group consisting of

a) a nucleotide primer comprising at least 15 consecutive nucleotides of a nucleotide sequence of any one of SEQ ID NOS:1-32,

b) a nucleotide primer comprising at least 15 consecutive nucleotides of a nucleotide sequence complementary to any one of SEQ ID NOS:1-32,

c) a nucleotide primer as in any one of claims 6-8,

d) a nucleotide primer comprising a nucleotide sequence of any one of SEQ ID NOS:35-46, and

e) a nucleotide primer comprising a nucleotide sequence complementary to any one of SEQ ID NOS:35-46.

12. (Original) The nucleotide probe or primer according to any one of claims 6-8, wherein the nucleotide probe or primer further comprises a marker compound.

13. (Original) A method of detecting a nucleic acid according to claim 1, wherein the method comprises:

a) contacting the nucleic acid to be detected with a nucleotide probe selected from the group consisting of

i) a nucleotide primer comprising at least 15 consecutive nucleotides of a nucleotide sequence of any one of SEQ ID NOS:1-32,

ii) a nucleotide primer comprising at least 15 consecutive nucleotides of a nucleotide sequence complementary to any one of SEQ ID NOS:1-32,

iii) a nucleotide primer as in any one of claims 6-8,

iv) a nucleotide primer comprising a nucleotide sequence of any one of SEQ ID NOS:35-46, and

v) a nucleotide primer comprising a nucleotide sequence complementary to any one of SEQ ID NOS:35-46; and

b) detecting a complex formed between the nucleic acid and the probe.

14. (Original) The method of claim 13, wherein the probe is immobilized on a support.

~~16~~ 15. (Currently Amended) A kit for detecting the nucleic acid according to claim 1, wherein the kit comprises

a) a nucleotide probe selected from the group consisting of

i) a nucleotide primer comprising at least 15 consecutive nucleotides of a nucleotide sequence of any one of SEQ ID NOS:1-32,

ii) a nucleotide primer comprising at least 15 consecutive nucleotides of a nucleotide sequence complementary to any one of SEQ ID NOS:1-32,

iii) a nucleotide primer as in any one of claims 6-8,

iv) a nucleotide primer comprising a nucleotide sequence of any one of SEQ ID NOS:35-46, and

v) a nucleotide primer comprising a nucleotide sequence complementary to any one of SEQ ID NOS:35-46; and optionally,

b) reagents necessary for a hybridization reaction.

16. (Original) The kit according to claim 15, wherein the probe is immobilized on a support.

17. (Original) A recombinant vector comprising the nucleic acid according claim 1.

18. (Original) The vector according to claim 17, wherein the vector is an adenovirus.

19. (Original) A recombinant host cell comprising the recombinant vector according to claim 17.

20. (Original) A recombinant host cell comprising the nucleic acid according claim 1.

21. (Withdrawn) An isolated nucleic acid encoding a polypeptide comprising an amino acid sequence of any one of SEQ ID NO:33 or SEQ ID NO:34.

22. (Withdrawn) A recombinant vector comprising the nucleic acid according to claim 21.

23. (Withdrawn) A recombinant host cell comprising the nucleic acid according to claim 21.

24. (Withdrawn) A recombinant host cell comprising the recombinant vector according to claim 22.

25. (Withdrawn) An isolated polypeptide selected from the group consisting of

a) a polypeptide comprising an amino acid sequence of SEQ ID NO:33 or SEQ ID NO:34,

b) a polypeptide fragment or variant of a polypeptide comprising an amino acid sequence of SEQ ID NO:33 or SEQ ID NO:34, and

c) a polypeptide homologous to a polypeptide comprising an amino acid sequence of SEQ ID NO:33 or SEQ ID NO:34.

26. (Withdrawn) An antibody directed against the isolated polypeptide according to claim 25.

27. (Withdrawn) The antibody according to claim 26, wherein the antibody comprises a detectable compound.

28. (Withdrawn) A method of detecting a polypeptide, wherein the method comprises

a) contacting the polypeptide with an antibody according to claim 26; and

b) detecting an antigen/antibody complex formed between the polypeptide and the antibody.

29. (Withdrawn) A diagnostic kit for detecting a polypeptide, wherein the kit comprises

a) the antibody according to claim 26; and

b) a reagent allowing detection of an antigen/antibody complex formed between the polypeptide and the antibody.

30. (Original) A pharmaceutical composition comprising the nucleic acid according to claim 1 and a physiologically compatible excipient.

31. (Original) A pharmaceutical composition comprising the recombinant vector according to claim 17 and a physiologically compatible excipient.

32. (Withdrawn) A method of treating and/or preventing paroxysmal kinesigenic choreoathetosis in a subject in need thereof by administering the nucleic acid according to claim 1.

33. (Withdrawn) A method of treating and/or preventing paroxysmal kinesigenic choreoathetosis in a subject in need thereof by administering the recombinant vector according to claim 20.

34. (Withdrawn) A method of treating and/or preventing paroxysmal kinesigenic choreoathetosis in a subject in need thereof by administering an isolated ABCC12 polypeptide comprising the amino acid sequence of SEQ ID NO:33 or SEQ ID NO:34.

35. (Withdrawn) A pharmaceutical composition comprising a polypeptide comprising an amino acid sequence of SEQ ID NO:33 or SEQ ID NO:34, and a physiologically compatible excipient.

36. (Withdrawn) A method of identifying active ingredients for the prevention or treatment of paroxysmal kinesigenic choreoathetosis using an isolated ABCC12 polypeptide comprising an amino acid sequence of SEQ ID NO:33 or SEQ ID NO:34.

37. (Withdrawn) A method of identifying active ingredients for the prevention or treatment of paroxysmal kinesigenic choreoathetosis using a recombinant host cell expressing the ABCC12 polypeptide comprising an amino acid sequence of SEQ ID NO:33 or SEQ ID NO:34.

38. (Withdrawn) A method of screening an agonist or an antagonist of the ABCC12 polypeptide, comprising

a) preparing a membrane vesicle comprising at least one of the ABCC12 polypeptide and a substrate comprising a detectable marker;

b) incubating the vesicle obtained in step a) with an agonist or antagonist candidate compound;

c) qualitatively and/or quantitatively measuring a release of the substrate comprising the detectable marker; and

d) comparing the release of the substrate measured in step b) with a measurement of a release of a labeled substrate by a membrane vesicle that has not been previously incubated with the agonist or antagonist candidate compound.

39. (Withdrawn) A method of screening an agonist, or an antagonist of ABCC12 polypeptide, comprising

a) incubating a cell that expresses the ABCC12 polypeptide with an anion labeled with a detectable marker;

b) washing the cell of step a) whereby excess labeled anion that has not penetrated into the cell is removed;

c) incubating the cell obtained in step b) with an agonist or antagonist candidate compound for the ABCC12 polypeptide;

d) measuring efflux of the labeled anion from the cell; and

e) comparing the efflux of the labeled anion determined in step d) with efflux of a labeled anion measured with a cell that has not been previously incubated with the agonist or antagonist candidate compound.

40. (Withdrawn) An implant comprising the recombinant host cell according to claim 23 or 24.

AMENDMENTS TO THE DRAWINGS:

The enclosed sheet of Figure 1 has been amended to include Seq. ID NOS for sequences set forth in the Figure.